

Integrated Pest Management: Crops at Risk, Risk Avoidance and Mitigation, and Methyl Bromide Transitions Competitive Grants Programs

FY 2009 Request for Applications

APPLICATION DEADLINE: May 11, 2009



U.S. Department of Agriculture



Cooperative State Research, Education, and Extension Service

**COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE;
U.S. DEPARTMENT OF AGRICULTURE**

**INTEGRATED PEST MANAGEMENT: CROPS AT RISK COMPETITIVE GRANTS
PROGRAM**

**INTEGRATED PEST MANAGEMENT: RISK AVOIDANCE AND MITIGATION
COMPETITIVE GRANTS PROGRAM**

**INTEGRATED PEST MANAGEMENT: METHYL BROMIDE TRANSITIONS
COMPETITIVE GRANTS PROGRAM**

INITIAL ANNOUNCEMENT

CATALOG OF FEDERAL DOMESTIC ASSISTANCE: These programs are listed in the Catalog of Federal Domestic Assistance under 10.303, Integrated Research, Education, and Extension Competitive Grants Program.

DATES: Applications must be received by close of business (COB) on **May 11, 2009 (5:00 p.m. Eastern Time)**. Applications received after this deadline will normally not be considered for funding. Comments regarding this request for applications (RFA) are requested within six months from the issuance of this notice. Comments received after that date will be considered to the extent practicable.

STAKEHOLDER INPUT: The Cooperative State Research, Education, and Extension Service (CSREES) is requesting comments regarding this RFA from any interested party. These comments will be considered in the development of the next RFA for the program, if applicable, and will be used to meet the requirements of section 103(c)(2) of the Agricultural Research, Extension, and Education Reform Act of 1998 (7 U.S.C. 7613(c)(2)). This section requires the Secretary to solicit and consider input on a current RFA from persons who conduct or use agricultural research, education and extension for use in formulating future RFAs for competitive programs. Written stakeholder comments on this RFA should be submitted in accordance with the deadline set forth in the DATES portion of this Notice.

Written stakeholder comments should be submitted by mail to: Policy and Oversight Branch; Office of Extramural Programs; Cooperative State Research, Education, and Extension Service; USDA; STOP 2299; 1400 Independence Avenue, SW; Washington, DC 20250-2299; or via e-mail to: RFP-OEP@csrees.usda.gov. (This e-mail address is intended only for receiving comments regarding this RFA and not requesting information or forms.) In your comments, please state that you are responding to the Integrated Pest Management: Crops at Risk, Risk Avoidance and Mitigation, and Methyl Bromide Transitions Competitive Grants Programs RFA.

EXECUTIVE SUMMARY: CSREES requests applications for the following programs:

- 1) Integrated Pest Management: Crops at Risk Competitive Grants Program (CAR);
- 2) Integrated Pest Management: Risk Avoidance and Mitigation Competitive Grants Program (RAMP); and the
- 3) Integrated Pest Management: Methyl Bromide Transitions Competitive Grants Program (MBT).

These are Integrated Pest Management (IPM) Programs designed to support integrated, multifunctional/multidisciplinary agricultural research, extension, and education activities that address complex pest management priorities in United States agriculture. The anticipated amount available for support of CAR in FY 2009 is approximately \$1,300,000. The anticipated amount available for support of RAMP in FY 2009 is approximately \$4,200,000. The anticipated amount available for support of MBT in FY 2009 is approximately \$2,950,000.

This notice identifies the objectives for CAR, RAMP and MBT projects, the eligibility criteria for projects and applicants, and the application forms and associated instructions needed to apply for a CAR, RAMP, and/or MBT grant. CSREES additionally requests stakeholder input from any interested party for use in the development of the next RFA for these programs.

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PART I—FUNDING OPPORTUNITY DESCRIPTION

A. Legislative Authority and Background

Section 406 of the Agricultural Research, Extension, and Education Reform Act of 1998 (AREERA) (7 U.S.C. 7626), as reauthorized by Section 7306 of the Food, Conservation, and Energy Act of 2008 (FCEA) (Pub. L. 110-246), authorized the Secretary of Agriculture to establish a competitive grants program that provides funding for integrated, multifunctional agricultural research, extension, and education activities. Subject to the availability of appropriations to carry out this program, the Secretary may award grants to colleges and universities (as defined by section 1404 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA) (7 U.S.C. 3103)), as amended, on a competitive basis for projects that address priorities in United States agriculture and involve integrated research, education, and extension activities, as determined by the Secretary in consultation with the National Agricultural Research, Extension, Education, and Economics Advisory Board.

Section 7206 of the Farm Security and Rural Investment Act of 2002 amended section 406(b) of AREERA to add the 1994 Land-Grant Institutions as eligible to apply for grants under this authority.

B. Purpose and Priorities

IPM Tactics and Diversified IPM Systems.

This RFA solicits applications for the IPM Section 406 Crops at Risk (CAR), Risk Avoidance and Mitigation (RAMP), and Methyl Bromide Transitions (MBT) Competitive Grants Programs. The IPM Section 406 Programs seek to solve critical agricultural issues, priorities, or problems through the integration of research, education, and extension activities. They are designed to fund the development of new IPM approaches or the improvement of existing IPM systems.

This RFA moves three existing program areas into a single comprehensive competitive grants program solicitation that supports IPM tactics and diversified IPM systems.

Tactics. Some of the nation's most pressing pest management problems are caused when a critical tactic in a management program is no longer available due to development of pest resistance, regulatory action or marketing decisions of manufacturers. The loss of a key management tactic can have devastating impacts on productivity, product quality and profitability. Examples include the impending loss of methyl bromide or the loss of effectiveness of atrazine due to the development of resistance in weed populations. This RFA will support research, education, and extension projects to address immediate needs that result from the loss of a tactic that is critical to agricultural, natural resource or urban pest management systems. The tactics components of this RFA include CAR and MBT programs.

Diversified IPM Systems. The development of diversified IPM systems is the long-term sustainable solution to many pest management problems. This RFA will support long-term

projects focused on development and implementation of innovative IPM systems on an area-wide or landscape basis. The outcomes associated with IPM systems projects will be reduced reliance on single pest management tactics, the reduction of potential risks to human health and the environment caused by pests or the use of pest management practices, and increased economic benefits of adopting IPM practices. IPM systems projects will typically be multi-state or regional in scale and will involve multiple managed ecosystems with emphasis on enhanced stability and sustainability of IPM systems. The diversified IPM system component of this RFA includes the RAMP program.

The concept of **Prevention, Avoidance, Monitoring, and Suppression** of pest populations (the **PAMS** approach) should be considered in proposals to these programs. In order to meet IPM goals for these programs, proposals should incorporate tactics in at least three of the four PAMS components. The rationale for requiring only three of the four strategies is that success in prevention strategies will often make either avoidance or suppression strategies unnecessary. (See explanation at: <http://www.ipmcenters.org/Docs/PAMS.pdf>)

Projects funded within the CAR, RAMP, and MBT program areas will cover a broad range of new methodologies, technologies, systems and strategies for implementing integrated crop and pest management programs.

Applicants should consider: (1) the evolving science and technology; (2) information identifying IPM practices (e.g., crop profiles and strategic plans); (3) risk mitigation needs; (4) the pest management needs of producers; (5) the integration of research, education, and extension activities; (6) involving 1890, 1994 land-grant institutions and HSACUs; and (7) relevance to the National IPM Roadmap (<http://www.ipmcenters.org/IPMRoadMap.pdf>). Projects should focus on enhancing grower knowledge and adoption of appropriate IPM practices through extension outreach and demonstrations relevant to “real-world” systems. Decisions made in implementing the Food Quality Protection Act of 1996 (FQPA), environmental issues, worker safety, pest resistance, and the emergence of new pests will continue to impact the effectiveness of IPM practices and thus become important considerations when developing applications for the IPM Section 406 Program.

Project Director’s Workshop. It is the intent of the IPM Section 406 Program to require successful applicants or a designee to attend at least one Project Directors’ Workshop during the term of their project. For the purposes of budget development, applicants are required to request funds to support participation in at least one such workshop. The request for these funds should be clearly indicated in the budget narrative section of the application.

IPM Section 406 encourages projects that develop content suitable for delivery through eXtension (http://about.extension.org/mediawiki/files/5/51/EXECUTIVE_SUMMARY_-_March_14%2C_2006_-_YEAR_2.pdf). This content is for end users, as opposed to staff development, and must align with the eXtension Implementation Plan (available at <http://about.extension.org/wiki/Planning>). Funds may be used to contribute to existing Communities of Practice (COPs) (http://about.extension.org/wiki/Glossary_of_eXtension_Terms#Community_of_Practice_.28CoP.29;) or form new COPs that focus on integrated pest management (for examples of developing COPs and guidance on forming COPs, see http://cop.extension.org/wiki/Main_Page).

C. Program Area Description

In FY 2009, applications are being solicited in three (3) program areas. Each program area has a specific focus, and it is essential that applicants read the following descriptions and tables carefully when preparing applications.

1. Crops at Risk (CAR)

Program Area Number: 112.A

The goal of a CAR application should be to enhance the development and implementation of innovative, ecologically based sustainable IPM system(s). Preferably, this should involve a diversity of tactics and approaches for a single or specific food or fiber commodity in commercial production. Applications may address pre- and/or post-harvest system(s).

Applications may address either a major acreage or high value crop commodity such as key fruits and vegetables. The primary emphasis of the application should be on crop productivity and profitability, while addressing critical environmental quality and human health issues.

Proposed projects must demonstrate need/relevance as identified by stakeholders either through Crop Profiles, Pest Management Strategic Plans, or similar identifiable document(s) developed by groups involving stakeholders. Crop Profiles and Pest Management Strategic Plans can be found at <http://www.ipmcenters.org/products.cfm>.

Applications must identify how proposed projects support and contribute to the goal(s) identified in the National Roadmap for Integrated Pest Management (available at <http://www.ipmcenters.org/IPMRoadMap.pdf>).

Applications should present a design and plan for implementation of results generated by the project. Also, the application must provide feasible/doable/economic approaches and identify criteria to measure and assess implementation, adoption and potential impact. Applicants are encouraged to submit CAR proposals that embody and clearly lay out truly integrated programs that include at least two of the three integrated research, education, and extension elements [see Part VIII, E. for definitions].

2. Risk Avoidance and Mitigation (RAMP)

Program Area Number: 112.B

The goal of a RAMP proposal should be to enhance the development and implementation of innovative, ecologically based sustainable IPM strategies and system(s) for (a) multi-crop food and fiber production systems; (b) an area-wide or a landscape scale agro-ecosystem; or (c) a documented pesticide impact on water, human or environmental health.

RAMP applications may address major acreage agricultural production systems, high value crops such as key fruit and vegetable systems, or other agro-ecosystems. The primary emphasis of the application should be on productivity and profitability while addressing critical environmental quality and human health issues. The intent of RAMP is to fund medium-term projects that emphasize systems approaches.

Applications should be multi-state/regional in scale or show relevance beyond an individual state. Proposed projects must demonstrate need/relevance as identified by stakeholders either through Crop Profiles, Pest Management Strategic Plans, or similar identifiable document(s) developed by groups involving stakeholders. Crop Profiles and Strategic Plans can be found at <http://www.ipmcenters.org/products.cfm>.

Applications must identify how proposed projects support and contribute to the National Roadmap for IPM (available at <http://www.ipmcenters.org/IPMRoadMap.pdf>).

Each application should present a design and plan for implementation of results generated by the project. Also, the application must provide reasonable/doable/economic approaches and criteria to measure and assess implementation, adoption and potential impact. Applicants are encouraged to submit RAMP proposals that embody and clearly lay out truly integrated programs that include at least two of the three integrated research, education, and extension elements [see Part VIII, E. for definitions].

Differences between CAR and RAMP Programs		
	CAR	RAMP
Goals:	Create or enhance IPM practices for individual food or fiber crops grown for commercial purposes	Enhance development and implementation of innovative IPM strategies for multi-crop food and fiber production systems, or production systems on an area-wide or landscape scale
Integrated Programs:	Research, Education, & Extension - Projects should be multidisciplinary; may involve multiple pests	Research, Education, & Extension – Projects are multidisciplinary, involve multiple pests, are typically multi-state or regional in scale (or must show relevance beyond an individual state); projects should use a systems approach
Primary Emphasis:	Integrated multifunctional projects for crops with high priority IPM needs, identified by stakeholders	Projects should address crop productivity and profitability, while addressing critical environmental quality and human health issues; emphasis should be placed on enhancing stability and sustainability of IPM Systems
Funding:	Short-term (between 2 to 4 years)	Medium-term (up to 4 years)
Relevant Systems:	Crop and cropping systems at risk from pest damage due to phase-out of chemicals from FQPA	Major acreage crop production systems, key fruit and vegetable production systems, or other agro-ecosystems where identified environmental quality or human health issues exist
Collaboration:	Projects should foster collaboration between individuals and/or institutions	Extensive collaboration between individuals and institutions is expected

A strong application for the CAR and/or RAMP programs would likely:

1. Describe how the proposed project will contribute to the National Roadmap for IPM;
2. Describe an integrated [i.e., one that contains at least 2 of the 3 (research, education, and extension) components] multifunctional/multidisciplinary project that fosters collaboration between individuals and/or institutions; and
3. Assess the use and efficacy of available pest management tools, develop and demonstrate the efficacy of reduced-risk IPM alternatives, and/or identify possible transition or mitigation strategies that serve as viable IPM options for crops and agro-ecosystems at risk.

The following websites may serve as useful information resources in developing CAR and RAMP program applications:

1. Regional Integrated Pest Management Centers (<http://www.ipmcenters.org/>);
2. CSREES Pest Management Programs (<http://www.csrees.usda.gov/nea/pest/pest.html>);
3. Crop Profiles and Pest Management Strategic Plans

(<http://www.ipmcenters.org/products.cfm>);

4. IPM Roadmap (<http://www.ipmcenters.org/IPMRoadMap.pdf>);
5. EPA Office of Pesticide Programs (<http://www.epa.gov/pesticides>); and
6. Interregional Research Project #4 (IR-4) (<http://ir4.rutgers.edu/>).

Funding limits have been set at \$200,000 per year (2 to 4 year duration) and \$625,000 per year (up to 4 years duration) for CAR and RAMP, respectively. See the urls for CAR and RAMP funded projects at: <http://www.csrees.usda.gov/fo/cropsatriskicgp.cfm> and <http://www.csrees.usda.gov/fo/riskavoidancemitigationicgp.cfm>, respectively.

3. Methyl Bromide Transitions

Program Area Number 112.C

The goal of an MBT application should be to support the discovery and implementation of practical pest management alternatives to methyl bromide or reduction of methyl bromide emissions for uses for which the United States is requesting critical use exemptions. Methyl bromide (MeBr) is an odorless, colorless gas that has been used as an agricultural soil and structural fumigant to control a wide variety of pests. However, because MeBr depletes the stratospheric ozone layer and is classified as a Class I ozone-depleting substance, the amount of MeBr produced and imported in the United States is being incrementally reduced. In accordance with the *Montreal Protocol on Substances that Deplete the Ozone Layer* and the Clean Air Act (<http://www.epa.gov/air/caa/>), the United States was to reduce methyl bromide production and net imports incrementally from the 1991 baseline until the complete phase-out in 2005. Since 2005, the only allowable exemptions are those nominations approved by the United Nations Environment Programme Methyl Bromide Technical Options Committee (MBTOC), such as the critical use exemptions (CUEs). Critical Use Nominations (CUNs) for an exemption may be approved when: a) there are no alternatives currently available that are technically and economically feasible; b) there are no alternatives acceptable from a public health standpoint; and c) an active research program is seeking viable alternatives to use of methyl bromide fumigation or seeking reduction in emissions for that nomination. Under the Montreal Protocol and the Clean Air Act, (<http://www.epa.gov/air/caa/>) the production and import phase-out for methyl bromide in the United States have followed this schedule:

1993 to 1998	Freeze at 1991 baseline levels (U.S. consumption ~25,500 Metric Tonnes; consumption = production + import - export).
1999 and 2000	25% reduction from baseline levels.
2001 and 2002	50% reduction from baseline levels.
2003 and 2004	70% reduction from baseline levels.
2005	100% phase out -except for allowable exemptions such as critical use nominations (CUNs) agreed to by the Montreal Protocol Parties.
2006	32% of baseline levels was authorized for CUNs.
2007	26% of the 1991 baseline levels was authorized for CUNs.
2008	21% of the 1991 baseline levels was authorized for CUNs.
2009	16.7% of the 1991 baseline levels was authorized for CUNs.
2010	15.7% of the 1991 baseline levels was requested for CUNs.

The MBT program area seeks proposals to ensure that economically viable and environmentally sound alternatives to methyl bromide are in place and available as soon as possible for the current 2010 Critical Use Nominations. Those submitting applications should consider these specific CUNs, which include the following uses: commodities; cucurbits; eggplant; fruit, nut, and flower nursery; food facilities; forest seedling; ham; orchard replant; ornamental; peppers; post harvest; strawberry fruit; strawberry nursery; sweet potato slips; and tomato and the 2009 Methyl Bromide Usage Newer Numerical Index (BUNNI), which are located under “Nomination Chapters for 2010” on the right sidebar of the following EPA website:

http://www.epa.gov/ozone/mbr/2010_nomination.html. The BUNNI includes the projected timeline for transition from methyl bromide fumigation to alternatives related to specific uses. The 2010 CUNs listed on the website include descriptions of alternative controls or application methods evaluated and the barriers or specific limitations such as soil temperature, Karst, terrain, buffer zones, economics, etc., that limit alternatives and make continued use of methyl bromide necessary for each of the 15 nominations. Nominations include: Name(s) of alternative(s), technical and regulatory reasons for alternatives not being feasible or available; cost considerations; current research priorities; pests targeted; and characteristics of production systems. Proposals must include methods/technology to reduce methyl bromide use and emissions that address the specific conditions and factors (seasonal soil temperatures, soil types, cropping systems, costs, etc.) limiting transition from methyl bromide fumigation to alternative pest management strategies.

The MBT grant program area emphasizes commercial or field scale research targeting short- to medium-term solutions that will develop new alternatives, result in registration and adoption of new alternatives, and/or minimize methyl bromide emissions. Large-scale trials may identify variability, technical problems, and pest relationships to marketable yields that are not evident in small plot trials. Repeat of research for two or more cropping seasons or trials is encouraged. Comprehensive information on the impact of alternatives on efficacy and methyl bromide emissions and profit margins compared to methyl bromide fumigation is an integral part of the MBT program focus. Although much of the technology and potential alternatives developed for other crops/issues can be transferred to critical use nominations, adequate evaluation for specific new uses must be completed. Proposals addressing critical use nominations for which there is not an extensive database are encouraged.

The following components must be in a MBT proposal or it will not be considered:

- 1. Economic analysis with direct comparison of cost effectiveness of proposed alternative with methyl bromide.** Comprehensive information on the impact of such alternatives on efficacy and profit margins compared with methyl bromide fumigation is required. Repeat of research for two or more cropping seasons or trials is encouraged. Integrated projects regarding transition to an alternative type of cropping/storage/processing system that avoids the need for disinfestations with methyl bromide (e.g., transition to a covered system using soilless culture), will be considered if the alternative has the potential to serve as a viable short- to medium-term solution for operations currently dependent on methyl bromide.
- 2. Integration of two or more of the three facets (research, extension and education).**

At least two of the three science components (research, extension and education) must be included in proposed projects and generally no more than two thirds of the project's budget should be devoted to any one component. Formal extension and/or education programs to expedite adoption of proposed alternatives must be clearly delineated in the proposal and funding for these activities should be clearly outlined in the budget narrative. Research should address the critical use nominations or alternatives to methyl bromide for new critical pest management issues. The expectation is that research will not only result in adoption of techniques and methods to significantly reduce methyl bromide use or emissions, but will also lead to product registration, if required. The research will result in direct efficacy and economic comparisons of proposed alternatives with methyl bromide fumigation. Extension programs, such as field demonstrations, grower trials, workshops, and distributed information, should result in commercial awareness, understanding and adoption of new technology and methods to reduce methyl bromide emissions and/or adoption of alternatives to methyl bromide fumigation. Applicants are encouraged to submit a LOGIC model that details the activities; outputs; and learning, action, and condition outcomes of the proposed project. This information may be provided as a narrative or formatted into a logic model chart. More information and resources related to the logic model planning process are provided at http://www.csrees.usda.gov/funding/integrated/integrated_logic_model.html.

3. Clear statement of specific 2010 CUN and specific limitations being addressed. MBT applicants must explain how their work is applicable to the 2010 Critical Use Nomination (CUN). Even though the CUN for use of methyl bromide are on specific agricultural crops (e.g., tomato), from specific geographical areas, in specific crop production systems (e.g., open field) or for use in specific post-harvest applications or structural applications for which there are currently no acceptable alternatives, grant applications whose purpose is to alleviate one or more of the limitations for use of alternatives or to reduce methyl bromide emissions may come from any U.S. state or region. Proposals do not have to address all the pests for the 2010 CUN. Proposed projects may provide alternatives for management of one or more pests or limiting situations that may be potentially included in an integrated pest management system.

4. Timelines for completion of each major objective in the application.

The following are the 15 Critical Use Nominations for 2010:

1. Post-Harvest Use for Commodities. Includes walnuts, dried fruit (prunes, raisins, figs), dates, and dried beans garbanzo and blackeye) produced in California, which are under intense pressure from numerous insect pests. Requested by California Bean Shippers, California Dried Plum Board, California Walnut Commission, and California Date Commission.

2. Pre-plant Soil Use for Cucurbits Grown in Open Fields. Includes cucurbits of several types (squash, melons, and/or cucumber) grown in the southeastern US (except Florida), Maryland, Delaware, and Michigan. These crops generally are grown in open fields on plastic tarps, often followed by various other crops. Harvest is destined for the fresh market. Requested by: Michigan-Cucurbit, Mardel Cucurbit, Southeast-Cucurbit, Georgia-Squash, Georgia-Cucumber, and Georgia-Melon.

3. Pre-plant Soil Use for Eggplant Grown in Open Fields. This is a request for fresh market eggplant grown in open fields in the States of Florida, Georgia, and Michigan.

4. Pre-plant Soil Use for Fruit, Nut and Flower Nurseries. This nomination is based on requests for critical use of methyl bromide by producers of nursery-grown raspberry, roses, and deciduous tree planting material. Request by Western Raspberry Nurseries, California Rose Growers, California Fruit and Tree Nut Growers.

5. Post-Harvest Use in Structures - Food Processing Plants. This sector includes rice mills, flour mills, pet food manufacturing facilities, and a few bakeries. This nomination is for facilities, or portions of facilities, that are unsuitable for the alternatives of methyl bromide, and where the alternatives are not economically feasible. Requested by Rice Miller's Association, Bakeries, Pet Food Institute, and North American Miller's Association.

6. Pre-plant Soil Use for Forest Seedlings. Forest seedling nurseries in the United States supply conifer and hardwood seedlings that are used for reforestation, forest establishment, fiber production, and wildlife and conservation uses. Nurseries in the United States are located in eight climate zones (Zones 3 to 10) and have mostly light or medium soils. The majority of seedlings are species of conifers, especially pine. In addition, 30-60 species of hardwoods, such as oaks, hickory, poplars, and ash, are produced. Nurseries produce seedlings adapted to their respective regional conditions, with variables such as climate and soil type. Forest seedling nurseries requesting critical use of methyl bromide include both public and private nursery operations. Specific requests from: Southern Forest Nursery, International Paper, Weyerhaeuser (SE, NW), NE Forest & Conservation Nursery, and Michigan Seedling Association.

7. Post-Harvest Use on Dry Cured Pork Products. This sector is for the production of cured meat products, such as country hams. These are produced primarily in the southern United States. Requested by: Gwaltney of Smithfield, National Country Ham Association, Nahunta Pork Center, and American Association of Meat Processors.

8. Pre-plant Soil Use for Orchard Replant. The Orchard Replant sector represents stone fruit, almond, and walnut orchards, and grapes grown in parts of California. Growers of all of these crops face a common threat—nematodes and a poorly understood disease complex called orchard replant “problem”, or “disorder”. The problem can be of varying severity depending on orchard location, crop, soil texture, soil moisture, or other factors. Requests by: California Grape and Tree Fruit League-Stone Fruit; California Grape and Tree Fruit League-Raisin & Table Grapes; Central California Winegrowers; California Walnut Commission; and Almond Hullers & Processors Association.

9. Pre-plant Soil Use for Cut Flower, Bulb, and Herbaceous Perennial Ornamentals Grown in Open Fields or in Protected Environments. In the United States, cut flower, cut foliage and bulb crops are grown in open fields and under cover (including glass, poly, and saran). Requested by: California Cut Flower Commission; Florida Cut Flowers; and Michigan Herbaceous Perennials.

10. Pre-plant Soil Use for Peppers. This renomination covers peppers grown in the southeastern US, Florida, and Michigan. These crops generally are grown in open fields on plastic tarps, often followed by various other crops. Harvest is destined for the fresh market. Specific request by: Southeast Pepper, Georgia Pepper, Florida Pepper, Michigan Pepper, and California Pepper.

11. Post-Harvest Use by NPMA for Facilities and Commodities. This sector includes commodities and food processing plants treated by National Pest Management Association (NPMA) members and are not included in the Commodity or in the Food Facilities Chapters of the U.S. nomination. Commodities included in this application are: processed foods (such as chips, crackers, cookies and pasta), spices and herbs, cocoa, and cheese processing plants. Methyl bromide is typically utilized in processed food and feed facilities as a space fumigant for treating the facility one to three times per year. As the need arises, methyl bromide is also used for trailer fumigations of product or packaging material. These facilities are under intense pressure from many insect pests as well as rodents. Requested by: Processed Foods, Spices and Herbs, Cocoa, and Cheese Processing Plants.

12. Pre-plant Soil Use for Strawberries Grown for Fruit in Open Fields. This nomination is for methyl bromide use in three major strawberry production areas—California, Florida, and several states in the eastern U.S. Request by: California Strawberry Commission, Eastern Strawberry and Florida Fruit and Vegetable Association.

13. Pre-plant Soil Use for Strawberry Nurseries in Open Fields or in Protected Environments. This nomination is for methyl bromide for the production of strawberries in California, Florida, and several states in the eastern U.S. Requested by California Strawberry Nursery Association and Southeastern Strawberry Consortium.

14. Pre-plant Soil Use for Tomato Grown in Open Fields. Tomato crops are grown in open fields for fruit in Michigan and South-Eastern United States. Currently registered alternatives to methyl bromide do not consistently provide effective control of nutsedge weed species and more time is needed to evaluate relationship between fumigant alternatives, various mulches, and herbicide systems under different growing conditions. The U.S. nomination is only for those areas where the alternatives are not suitable. In U.S. tomato production, there are several factors that make the potential alternatives to methyl bromide unsuitable. Request by Michigan Tomato, Maryland Tomato, Southeast Tomato, Georgia Tomato, and Florida Tomato.

15. Pre-plant Use on Sweet Potato Slips Grown in Open Fields. This request is for growers who cannot use 1,3-dichloropropene because of: the California prohibition on its use in January and the township cap on 1,3-D requiring an application factor of 1.9 in December and the cap being exceeded in November (Cal DPR. 2002). The soil for sweet potato slips is fumigated from November through January. Sweet potatoes are transplanted from plant propagules, called “slips”, which are transplanted between late April and late May. The majority of sweet potatoes are harvested in early November. They are a warm-season crop and are sensitive to even a light frost and must be planted and harvested during seasons where there is no chance of frost. Sweet potato production generally occurs in sandy to loamy sand soils since heavy soils affect yield

and root quality. Request by the Sweet Potato Council of California.

The following resources may be useful in developing Methyl Bromide Transitions applications:

In addition to the information contained in the 2010 CUNs and 2009 BUNNIs, a matrix of alternatives identified by the United Nations' technical committees for methyl bromide is available at http://www.epa.gov/ozone/mbr/in_alt_in.html. While not all of the alternatives listed by the United Nations are currently available to the agricultural and structural industries in the United States, some do have potential to control pests currently controlled by methyl bromide. Integration of specific controls into current production systems will depend on availability, efficacy, logistics, economics, and grower acceptance. In all these cases, combinations of chemical and non-chemical materials and methods will likely be the most efficacious. It is unlikely that there will be one alternative for all of the uses of methyl bromide, but there may be several specific pest control tools which can manage specific pests currently controlled with methyl bromide when used as part of an overall integrated pest management program. EPA has published 30 case studies which describe potential alternatives to the use of methyl bromide. Background information and an overview of the search for alternatives to methyl bromide are presented by E. N. Roskopf, et. al., *Alternatives to Methyl Bromide: A Florida Perspective*, at <http://www.apsnet.org/online/feature/methylbromide/>.

Grants for this program are for integrated projects up to three years. Applications are expected to be multi-investigator and/or multi-institutional. Although no maximum limit has been set for funding individual MBT proposals, please see abstracts of funded projects at: (www.csrees.usda.gov/fo/methylbromideicgp.html).

PART II—AWARD INFORMATION

A. Available Funding

There is no commitment by USDA to fund any particular application or to make a specific number of awards. In FY 2009, it is anticipated that the amount available for support of CAR is approximately \$1,300,000, the anticipated amount available for support of RAMP is approximately \$4,200,000, and the anticipated amount available for Methyl Bromide Transitions is approximately \$2,950,000.

B. Types of Applications

In FY 2009, applications may be submitted to the CAR, RAMP, or MBT Programs as one of the following two types of requests:

(1) New application. This is a project application that has not been previously submitted to the CAR, RAMP, or MBT Programs. All new applications will be reviewed competitively using the selection process and evaluation criteria described in Part V—Application Review Requirements.

(2) Resubmitted application. This is an application that had previously been submitted to the CAR, RAMP, or MBT Programs but was not funded. Project Directors (PDs) must respond to the previous review panel summary (see Response to Previous Review, Part IV, B., 3.). Resubmitted applications must be received by the relevant due dates, will be evaluated in competition with other pending applications in the appropriate area to which they are assigned, and will be reviewed according to the same evaluation criteria as new applications.

C. Project Types

The following are funding estimates for FY 2009, maximum annual project budgets, and acceptable project periods for each of the program areas within IPM Section 406:

Program Area	Funding Estimate FY 2009	Maximum Annual Project Budget	Acceptable Project Period
Crops at Risk	\$1,300,000	\$200,000	Between two (2) to four (4) yrs.
Risk Avoidance and Mitigation	\$4,200,000	\$625,000	Up to four (4) yrs.
Methyl Bromide Transitions	\$2,950,000	None set	Up to three (3) yrs.

PART III—ELIGIBILITY INFORMATION

A. Eligible Applicants

Colleges and universities (as defined in section 1404 of NARETPA) (7 U.S.C. 3103) are eligible to submit applications for the Integrated Pest Management: Crops at Risk (CAR), Risk Avoidance and Mitigation (RAMP), or Methyl Bromide Transitions (MBT) Competitive Grants Programs. Section 1404 of NARETPA was amended by section 7101 of the Food, Conservation, and Energy Act of 2008 (FCEA) to define Hispanic-serving Agricultural Colleges and Universities (HSACUs) (see Part III, B. and Part VIII, E. for more information), and to include research foundations maintained by eligible colleges or universities.

For the purposes of this program, the terms “college” and “university” mean an educational institution in any state which (1) admits as regular students only persons having a certificate of graduation from a school providing secondary education, or the recognized equivalent of such a certificate; (2) is legally authorized within such state to provide a program of education beyond secondary education; (3) provides an educational program for which a bachelor’s degree or any other higher degree is awarded; (4) is a public or other nonprofit institution; and (5) is accredited by a nationally recognized accrediting agency or association. Applications also may be submitted by 1994 Land-Grant Institutions (see Part VIII, E.), HSACUs, and research foundations maintained by eligible colleges or universities. An applicant’s failure to meet an eligibility criterion by the time of an application deadline will preclude CSREES from reviewing an application and making an award.

Award recipients may subcontract to organizations not eligible to apply provided such organizations are necessary for the conduct of the project.

B. Hispanic-serving Agricultural Colleges and Universities

Section 7101 of the Food, Conservation, and Energy Act of 2008 amended section 1404 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA) to add a new group of cooperating institutions, Hispanic-serving Agricultural Colleges and Universities (HSACUs). HSACUs are colleges and universities that qualify as Hispanic-serving Institutions (HSIs) and offer associate, bachelors, or other accredited degree programs in agriculture-related fields. HSACUs do not include 1862 land-grant institutions.

Eligibility under the Integrated Pest Management: CAR, RAMP or MBT Competitive Grants Programs

Pursuant to section 406 of the Agricultural Research, Extension, and Education Reform Act of 1998 (AREERA), 7 U.S.C. 7626, Integrated Research, Education, and Extension Competitive Grant Program, all four (4) year HSIs are eligible to apply for a grant under the CAR, RAMP and MBT Competitive Grants Programs. Two (2) year HSIs, however, may be eligible to apply only upon a determination by CSREES that the institution offers an associate or other accredited degree programs in agriculture-related fields. To seek an eligibility determination for grants under this RFA, two (2) year HSIs may submit a one-page request to CSREES certifying that they are a Hispanic-serving institution, as defined in section 502 of the Higher Education Act of 1965 (20 U.S.C. 1101a), and providing a justification that they do offer associate or other

accredited degree programs in agriculture-related fields. Eligibility determinations are valid for FY 2009 only and must be renewed every FY.

HSIs that seek a determination of eligibility may submit a request before the application due date to HSACU@csrees.usda.gov directly or as a PDF attachment to the SF-424-R&R application package submitted through Grants.gov.

Additional questions on HSACU eligibility can be addressed to Multicultural Alliances, Science and Education Resources Development (SERD), at HSACU@csrees.usda.gov, (202) 720-1254, or via fax (202) 720-2030.

An applicant's failure to meet an eligibility criterion by the time of an application deadline will preclude CSREES from reviewing an application and making an award.

Award recipients may subcontract to organizations not eligible to apply provided such organizations are necessary for the conduct of the project.

C. Cost Sharing or Matching

If a grant provides a particular benefit to a specific agricultural commodity, the grant recipient is required to match the USDA funds awarded on a dollar-for-dollar basis from non-Federal sources with cash and/or in-kind contributions. (See Part IV, B., 6. for details.)

CSREES may waive the matching funds requirement for a grant if CSREES determines that: (1) the results of the project, while of particular benefit to a specific agricultural commodity, are likely to be applicable to agricultural commodities generally; or (2) the project involves a minor commodity, the project deals with scientifically important research, and the grant recipient is unable to satisfy the matching funds requirement.

PART IV—APPLICATION AND SUBMISSION INFORMATION

A. Electronic Application Package

Only electronic applications may be submitted via Grants.gov to CSREES in response to this RFA.

Prior to preparing an application, it is suggested that the PD/PI first contact an Authorized Representative (AR)(also referred to as Authorized Organizational Representative or AOR) to determine if the organization is prepared to submit electronic applications through Grant.gov. If the organization is not prepared, the AR should see http://www.grants.gov/applicants/get_registered.jsp for steps for preparing to submit applications through Grants.gov.

The steps to access application materials are as follows:

1. In order to access, complete and submit applications, applicants must download and install a version of Adobe Reader compatible with Grants.gov. This software is essential to apply for CSREES Federal assistance awards. For basic system requirements and download instructions, please see http://www.grants.gov/help/download_software.jsp. To verify that you have a compatible version of Adobe Reader, Grants.gov established a test package that will assist you in making that determination. Grants.gov Adobe Versioning Test Package: <http://www.grants.gov/applicants/AdobeVersioningTestOnly.jsp>.
2. The application package must be obtained via Grants.gov, go to <http://www.grants.gov>, click on “Apply for Grants” in the left-hand column, click on “Step 1: Download a Grant Application Package and Instructions,” enter the funding opportunity number **USDA-CSREES-ICGP-002154** in the appropriate box and click “Download Package.” From the search results, click “Download” to access the application package.

Contained within the application package is the “CSREES Grants.gov Application Guide: A Guide for Preparation and Submission of CSREES Applications via Grants.gov.” This Guide contains an introduction and general Grants.gov instructions, information about how to use a Grant Application Package in Grants.gov, and instructions on how to complete the application forms.

If assistance is needed to access the application package (e.g., downloading or navigating Adobe forms), refer to resources available on the Grants.gov Web site first (<http://grants.gov/>). Grants.gov assistance is also available as follows:

- Grants.gov customer support
Toll Free: 1-800-518-4726
Business Hours: Monday through Friday 7:00 am – 9:00 pm Eastern Time
Email: support@grants.gov

B. Content and Form of Application Submission

Electronic applications should be prepared following Part V and VI of the document entitled “A Guide for Preparation and Submission of CSREES Applications via Grants.gov.” This guide is part of the corresponding application package (see Section A. of this Part). The following is **additional information** needed in order to prepare an application in response to this RFA. If there is discrepancy between the two documents, the information contained in this RFA is overriding.

Note the attachment requirements (e.g., portable document format) in Part III section 3. of the Guide. ANY PROPOSALS CONTAINING NON-PDF DOCUMENTS WILL BE AT RISK OF BEING EXCLUDED FROM CSREES REVIEW. Partial applications will be excluded from CSREES review. With documented prior approval, resubmitted applications will be accepted until close of business on the closing date in the RFA.

If you do not own PDF-generating software, Grants.gov provides online tools to assist applicants. Users will find a link to “Convert Documents to PDF” on <http://grants.gov/assets/PDFConversion.pdf>.

1. SF 424 R&R Cover Sheet

Information related to the questions on this form is dealt with in detail in Part V, 2. of the CSREES Grants.gov Application Guide.

2. SF 424 R&R Project/Performance Site Location(s)

Information related to the questions on this form is dealt with in detail in Part V, 3. of the CSREES Grants.gov Application Guide.

3. R&R Other Project Information Form

Information related to the questions on this form is dealt with in detail in Part V, 4. of the CSREES Grants.gov Application Guide.

a. Field 6. Project Summary/Abstract. The summary should also include the relevance of the project to the goals of CAR, RAMP, or MBT.

b. Field 7. Project Narrative.

PLEASE NOTE: The Project Narrative shall not exceed 20 pages of single-spaced written text and up to five additional pages for figures and tables. This maximum (25 pages) has been established to ensure fair and equitable competition. The Project Narrative must include all of the following:

(1) Introduction: Include information on the following in the order identified:

(a) A concise statement of the long-term goal(s) of the proposed project;

- (b) Summarize the body of knowledge or past activities that substantiate the need for the proposed project including information about or reference to a Crop Profile, Pest Management Strategic Plan or similar document with identifiable stakeholder input;
- (c) Describe ongoing or recently completed significant activities or publications related to the proposed activity including the work of key project personnel. Include preliminary data/information pertinent to the proposed project;
- (d) Provide estimates of the magnitude of the issues and their relevance to stakeholders and ongoing State-Federal food and agricultural research, education, and extension programs. Applicants must identify and review the tactics currently being used in the targeted cropping system, then define opportunities for new approaches;
- (e) Describe the role of stakeholders in problem identification and implementation of results; and
- (f) Response to Previous Review. This is only required for applications previously submitted to CAR, RAMP or MBT Programs but not funded. Project Directors (PDs) must respond to the previous review panel summary on no more than one page. Please include previous proposal number, if possible.

(2) Objectives:

- (a) Provide a brief review of the goal(s) stated in the Introduction; and
- (b) Present a clear, concise set of project objectives.

(3) Methods: Explicitly describe the procedures by objective for the proposed effort, include:

- (a) Techniques and methods to be employed, including their feasibility and rationale for their use in this project;
- (b) Timeline for proposed project. Applicants must provide milestones and verifiable indicators to measure progress;
- (c) Means by which extension and education activities will be evaluated. Applicants must describe plans to evaluate the outreach component, including means by which data will be analyzed and interpreted, and details of plans to communicate results to stakeholders and the public;
- (d) Description of stakeholder involvement in identification of project priorities, their implementation and adoption; and
- (e) Description of anticipated results or expected outcomes. Applicants must provide milestones and verifiable indicators to measure impact across a broad range of criteria (e.g., a timeline for grower adoption of techniques that lead to production, economic, and environmental benefits).

(4) Cooperation and Institutional Units Involved: Cooperative, multi-institutional and multidisciplinary applications are encouraged. Where applicable, identify each institutional unit contributing to the project and designate the lead institution or institutional unit. Clearly define the programmatic roles, responsibilities and budget for each institutional partner.

4. R&R Senior/Key Person Profile (Expanded)

Information related to the questions on this form is dealt with in detail in Part V, 5. of the CSREES Grants.gov Application Guide.

Note: You must attach “Current and Pending Support” information for each senior/key person identified. Even if no other funding is currently reported under the “Active” section of this attachment, you must still list information for this grant application under the “Pending” section of the attachment.

5. R&R Personal Data – As noted in Part V, 6. of the CSREES Grants.gov Application Guide, the submission of this information is voluntary and is not a precondition of award. If completing the information, **do not enter any data in the field requesting the social security number.**

6. R&R Budget

Information related to the questions on this form is dealt with in detail in Part V, 7. of the CSREES Grants.gov Application Guide.

a. Matching. If an applicant concludes that matching funds are not required (i.e., the grant does not provide a particular benefit to a specific agricultural commodity) as specified under Part III, B., Cost Sharing or Matching, a justification should be included in the budget narrative. CSREES will consider this justification when ascertaining final matching requirements or in determining if required matching can be waived. CSREES retains the right to make final determinations regarding matching requirements.

b. For those grants requiring matching funds as specified under Part III, B., the budget narrative should include written verification of commitments of matching support (including both cash and in-kind contributions) from third parties. Written verification means:

(a) For any third party cash contributions, a separate pledge agreement for each donation, signed by the authorized organizational representatives of the donor organization and the applicant organization, which must include: (1) The name, address, and telephone number of the donor; (2) the name of the applicant organization; (3) the title of the project for which the donation is made; (4) the dollar amount of the cash donation (the budget narrative must describe how the cash donation will be used on the project); and (5) a statement that the donor will pay the cash contribution during the grant period; and (b) For any third party in-kind contributions, a separate pledge agreement for each contribution, signed by the authorized representatives of the donor organization and the applicant organization, which must include: (1) The name, address, and telephone number of the donor; (2) the name of the applicant organization; (3) the title of the project for which the donation is made; (4) a good faith estimate of the current fair market value of the third party in kind contribution; and (5) a statement that the donor will make the contribution during the grant period.

The sources and amount of all matching support from outside the applicant institution should be summarized on a separate page and placed in the proposal as part of the Budget Narrative. All pledge agreements must be placed in the proposal immediately following the summary of matching support.

The value of applicant contributions to the project shall be established in accordance with applicable cost principles. Applicants should refer to OMB Circular A-21 (2 CFR Part 220), Cost Principles for Educational Institutions, for further guidance and other requirements relating to matching and allowable costs.

All required matching for multiple year projects must be secured in advance. Documentation for the entire project period must be provided the initial year of the application.

7. Supplemental Information Form

Information related to the questions on this form is dealt with in detail in Part VI, 1. of the CSREES Grants.gov Application Guide.

a. Field 2. Program Code. Enter the program code name “**Crops at Risk**” and the program code “**112.A**” or program code name “**Risk Avoidance and Mitigation**” and the program code “**112.B**” or program code name “**Methyl Bromide Transitions**” and the program code “**112.C**”.

C. Submission Dates and Times

Instructions for submitting an application are included in Part IV, Section 1.9 of the CSREES Grants.gov Application Guide.

Applications must be received by Grants.gov by COB on **May 11, 2009 (5:00 p.m. Eastern Time)**. Applications received after this deadline will normally not be considered for funding.

Correspondence regarding submitted applications will be sent using e-mail. Therefore, applicants are strongly encouraged to provide accurate e-mail addresses, where designated, on the SF-424 R&R Application for Federal Assistance.

If the AR has not received correspondence **from CSREES** regarding a submitted application within 15 days of the established deadline, please contact the Program Contact identified in Part VII of the applicable RFA and request the proposal number assigned to the application. **Failure to do so may result in the application not being considered for funding by the peer review panel. Once the application has been assigned a proposal number, this number should be cited on all future correspondence.**

D. Funding Restrictions

CSREES has determined that grant funds awarded under this authority may not be used for the renovation or refurbishment of research, education, or extension space; the purchase or installation of fixed equipment in such space; or the planning, repair, rehabilitation, acquisition, or construction of buildings or facilities.

Section 7132 of the Food, Conservation, and Energy Act of 2008, amended the National Agriculture Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3310(a)), limiting indirect costs to 22 percent of the total Federal funds provided under each award. Therefore, when preparing budgets, applicants should limit their requests for recovery of indirect costs to the lesser of their institution's official negotiated indirect cost rate or the equivalent of 22 percent of total Federal funds awarded. If no rate has been established the applicant may indicate "None—will negotiate" and a reasonable dollar amount for indirect costs may be requested, which will be subject to approval by USDA. In the latter case, if a proposal is recommended for funding, an indirect cost rate proposal must be submitted prior to award to support the amount of indirect costs requested. CSREES will request an indirect cost rate proposal and provide instructions, as necessary. An applicant may elect not to charge indirect costs and, instead, use all grant funds for direct costs. If indirect costs are not charged, the phrase "None requested" should be written in this space.

The maximum allowed indirect cost of 22 percent may be claimed under the Federal portion of the award, or the maximum allowed indirect cost of 22 percent may be claimed as matching contributions (if no indirect costs are requested). However, the maximum allowed indirect cost of 22 percent may not be claimed on both the Federal portion of the award and as matching contributions. (Note: An awardee may, as an example, request 11 percent of indirect costs on both the Federal portion of the award and as matching contributions. Or, an awardee may request any other, similar percentage combination that, when combined, does not exceed the 22 percent maximum indirect cost allowed.) **Nevertheless, the total combined percent of requested and contributed matching indirect costs cannot exceed 22%.**

E. Other Submission Requirements

The applicant should follow the submission requirements noted in the document entitled "A Guide for Preparation and Submission of CSREES Applications via Grants.gov."

An applicant may apply to more than one of the three program areas: CAR, RAMP, MBT. However, separate applications must be submitted to each program area. Applicants are strongly encouraged to carefully tailor each application to its respective program area. An application may be submitted only once to CSREES. The submission of duplicate or substantially similar applications concurrently for review by more than one program will preclude CSREES from reviewing or making an award for the redundant applications.

PART V—APPLICATION REVIEW REQUIREMENTS

A. General

Each application will be evaluated in a 2-part process. First, each application will be screened to ensure that it meets the administrative requirements as set forth in this RFA. Second, applications that meet these requirements will be technically evaluated by a review panel.

Reviewers will be selected based upon training and experience in relevant scientific, extension, or education fields, taking into account the following factors: (a) The level of relevant formal scientific, technical education, or extension experience of the individual, as well as the extent to which an individual is engaged in relevant research, education, or extension activities; (b) the need to include as reviewers experts from various areas of specialization within relevant scientific, education, or extension fields; (c) the need to include as reviewers other experts (e.g., producers, range or forest managers/operators, and consumers) who can assess relevance of the applications to targeted audiences and to program needs; (d) the need to include as reviewers experts from a variety of organizational types (e.g., colleges, universities, industry, state and Federal agencies, private profit and non-profit organizations) and geographic locations; (e) the need to maintain a balanced composition of reviewers with regard to minority and female representation and an equitable age distribution; and (f) the need to include reviewers who can judge the effective usefulness to producers and the general public of each application.

B. Evaluation Criteria

The evaluation criteria below will be used in reviewing applications submitted in response to this RFA:

CAR/RAMP

1. Proposal Relevance (50%):

- (a) Documented need. Application includes documentation substantiating that project is directed to current and likely future potential problems/challenges in IPM;
- (b) Stakeholder involvement;
- (c) Potential for project to contribute to IPM practices, implementation and adoption;
- (d) Documented importance of the commodity or production system to the nation, region or state and the risks or impacts on this commodity or production system;
- (e) Potential for project to make a difference, to have an impact;
- (f) Potential for project to contribute to long-term improvement and sustainability of IPM; and
- (g) Feasibility, probability of success.

2. Proposal Quality (50%):

- (a) Conceptual adequacy. Application clearly states objectives which are potentially attainable within project time, scope and budget;
- (b) Design. The application's methodology and analytical approach are appropriate to project objectives;
- (c) Involvement of appropriate, relevant expertise;
- (d) Experience of key project personnel;
- (e) Appropriateness of budget; and
- (f) Adherence to guidelines.

MBT

1. Proposal Merit and Quality (37 points):

- (a) Proposed project goal, approach, or hypothesis is conceptually adequate and addresses a stated program priority. Application includes documentation substantiating that project is directed to methyl bromide critical use nominations. (6 points)
- (b) Need for proposed project is demonstrated and target audience(s) identified. (5 points)
- (c) Objectives are clearly described, adequate, and appropriate for research, education, and extension. Two or more project functions (i.e., research, education, extension) are reflected in the project objectives. (5 points)
- (d) Proposed techniques, procedures, or methodologies are clearly described, suitable, and feasible for proposed project. (4 points)
- (e) Time allotted for attainment of objectives is reasonable. Promising alternatives to methyl bromide must be evaluated under commercial conditions for multiple years to insure that positive results are not due, in part, to a low pest pressure soil environment following many years of methyl bromide fumigation. Also, weather conditions have a marked influence on pest pressure. Alternatives that give acceptable efficacy under favorable weather and soil conditions may fail in other years when weather and soil conditions are less favorable. The potential for emergence of unexpected pests and pathogens, in the absence of methyl bromide, must be determined. Performance must be consistent over several production cycles and be technically and economically feasible when scaled-up from research-scale plots to commercial-scale fields. As alternatives become available, researchers need time to test application methods to gain

experience and confidence using an alternative to consistently produce nursery stock that meets certified pest- and pathogen-free requirements. (4 points)

(f) Expected results or outcomes are clearly stated, measurable, and achievable within the time frame of the project. State the potential commercial application of the proposed alternative methods and quantify methyl bromide use that might be replaced by the alternative methods. The proposal must include the potential timeline for replacement of the current critical use by the alternative methods proposed. (5 points)

(g) Articulation of a clear plan for managing the project, including how communication among members of the project team will be handled. (4 points)

(h) The project's implementation plan is clearly defined with appropriate educational activities for encouraging implementation of research results. This includes an appropriate mix of educational experiences ranging from awareness building to in-depth educational programs. Formal extension and/or education programs to expedite adoption of proposed alternatives must be delineated in the form of a measurable, outcome oriented plan in the proposal. Such programs must take place within the life of the project. (4 points)

2. Qualifications of Proposed Project Personnel, Adequacy of Facilities and Budget (27 points):

(a) Roles of project personnel are clearly defined. (5 points)

(b) Evidence that project personnel have sufficient expertise to complete the proposed project is provided. Necessary expertise includes individuals with experience in technology transfer and educational program delivery. (4 points)

(c) Evidence of quality partnerships with other disciplines and institutions is provided, where appropriate. (5 points)

(d) Evidence is provided of institutional experience and competence in the proposed area of work. (4 points)

(e) Support personnel, facilities, and instrumentation are adequate. (4 points)

(f) Proposed budget is appropriate for the scope of the proposed project and allocates reasonable resources to at least two of the three mission areas of CSREES (research, education, extension). Generally, no more than two thirds of the project's budget should be devoted to any one mission area. If a project is funded, beginning in the second year of funding, at least one member of the project team will be required to attend an annual International Methyl Bromide Alternatives Conference (<http://www.mbao.org/>). Reasonable travel expenses may be claimed as part of the project budget. (5 points)

3. Proposal Relevance and Effectiveness (36 points)

(a) Degree to which the project functions (research, education, extension) are integrated and necessary to address the stated problem or issue and achieve measurable outcomes. (5 points)

Integrated projects should include research, education, and extension/outreach objectives (at least two of three). These include: a) hypothesis-driven research to fill knowledge gaps that are critical to the development of practices and programs to address the problem area; b) create educational deliverables (e.g., interdisciplinary curricula and/or experiential learning for graduate and undergraduate students) that will train the next generation of scientists and educators who will work in the problem area; and/or c) deliver an effective extension/outreach program that will lead to measurable behavior change in an identified audience or stakeholder group. The MBT encourages projects that develop content suitable for delivery through eXtension. This content is for “end users” as opposed to staff development and must align with the eXtension Guiding Principles, Implementation Plan and other requirements as presented at the site <http://intranet.extension.org>. Funds may be used to contribute to an existing Community of Practice with a methyl bromide alternatives component or to form a new Community of Practice with a focus on methyl bromide alternatives education and outreach activities.

(b) Extent to which the proposed work addresses identified stakeholder needs. Focus on commercial or field scale research targeting short- to medium-term solutions that will develop new alternatives or result in registration and application of new alternatives or that minimize methyl bromide emissions, and contain comprehensive information on the impact of alternatives on crop yields and profit margins. Repeat of research for two or more cropping seasons or trials is encouraged. (5 points)

(c) Extent to which stakeholders and/or end users were/will be involved in problem identification, planning, implementation, and evaluation. Project should include a management plan (developed with input from stakeholder advisory groups) that leads to measurable improvements in the problem area. Documentation of interaction is expected in the proposal. (5 points)

(d) Suitability and feasibility of plan and methods for evaluating success of project activities (i.e. measurable outcomes) and documenting potential impact. (5 points)

(e) Probability that project results will reach beyond the project scale and duration, producing sustained education/extension initiatives. (4 points)

(f) For research, likelihood that it will fill knowledge gaps that are critical to the development of practices and programs to address the stated problem or issue. (4 points)

(g) For extension, assessment of the degree to which the project will lead to measurable behavior change in an identified audience or stakeholder group in the problem area. (4 points)

(h) For education, likelihood that the project will have an impact upon and advance the quality of food and agricultural sciences by strengthening institutional capacities to meet clearly

delineated needs and train the next generation of scientists and educators who will work in the problem or issue area. (4 points)

C. Conflicts of Interest and Confidentiality

During the peer evaluation process, extreme care will be taken to prevent any actual or perceived conflicts of interest that may impact review or evaluation. For the purpose of determining conflicts of interest, the academic and administrative autonomy of an institution shall be determined by reference to the current Higher Education Directory, published by Higher Education Publications, Inc., 6400 Arlington Boulevard, Suite 648, Falls Church, Virginia 22042. Phone: (703) 532-2300. Web site: <http://www.hepinc.com>.

Names of submitting institutions and individuals, as well as application content and peer evaluations, will be kept confidential, except to those involved in the review process, to the extent permitted by law. In addition, the identities of peer reviewers will remain confidential throughout the entire review process. Therefore, the names of the reviewers will not be released to applicants.

D. Organizational Management Information

Specific management information relating to an applicant shall be submitted on a one time basis, with updates on an as needed basis, as part of the responsibility determination prior to the award of a grant identified under this RFA, if such information has not been provided previously under this or another CSREES program. CSREES will provide copies of forms recommended for use in fulfilling these requirements as part of the preaward process. Although an applicant may be eligible based on its status as one of these entities, there are factors which may exclude an applicant from receiving Federal financial and nonfinancial assistance and benefits under this program (e.g., debarment or suspension of an individual involved or a determination that an applicant is not responsible based on submitted organizational management information).

PART VI—AWARD ADMINISTRATION

A. General

Within the limit of funds available for such purpose, the awarding official of CSREES shall make grants to those responsible, eligible applicants whose applications are judged most meritorious under the procedures set forth in this RFA. The date specified by the awarding official of CSREES as the effective date of the grant shall be no later than September 30 of the Federal fiscal year in which the project is approved for support and funds are appropriated for such purpose, unless otherwise permitted by law. It should be noted that the project need not be initiated on the grant effective date, but as soon thereafter as practical so that project goals may be attained within the funded project period. All funds granted by CSREES under this RFA shall be expended solely for the purpose for which the funds are granted in accordance with the approved application and budget, the regulations, the terms and conditions of the award, the applicable Federal cost principles (now codified at 2 CFR 215, 2 CFR 220 and 2 CFR 230), and the Department's assistance regulations (parts 3015, 3019 and 3430 of 7 CFR).

B. Award Notice

The award document will provide pertinent instructions and information including, at a minimum, the following:

- (1) Legal name and address of performing organization or institution to whom the Administrator has issued an award under the terms of this request for applications;
- (2) Title of project;
- (3) Name(s) and institution(s) of PDs chosen to direct and control approved activities;
- (4) Identifying award number assigned by the Department;
- (5) Project period, specifying the amount of time the Department intends to support the project without requiring recompetition for funds;
- (6) Total amount of Departmental financial assistance approved by the Administrator during the project period;
- (7) Legal authority(ies) under which the award is issued;
- (8) Appropriate Catalog of Federal Domestic Assistance (CFDA) number;
- (9) Applicable award terms and conditions (see <http://www.csrees.usda.gov/business/awards/awardterms.html> to view CSREES award terms and conditions);

(10) Approved budget plan for categorizing allocable project funds to accomplish the stated purpose of the award; and

(11) Other information or provisions deemed necessary by CSREES to carry out its respective awarding activities or to accomplish the purpose of a particular award.

C. Administrative and National Policy Requirements

Several Federal statutes and regulations apply to grant applications considered for review and to project grants awarded under this program. These include, but are not limited to:

7 CFR Part 1, subpart A—USDA implementation of the Freedom of Information Act.

7 CFR Part 3—USDA implementation of OMB Circular No. A-129 regarding debt collection.

7 CFR Part 15, subpart A—USDA implementation of Title VI of the Civil Rights Act of 1964, as amended.

7 CFR Part 331 and 9 CFR Part 121—USDA implementation of the Agricultural Bioterrorism Protection Act of 2002.

7 CFR Part 3015—USDA Uniform Federal Assistance Regulations, implementing OMB directives (i.e., OMB Circular Nos. A-21 and A-122 (2 CFR Parts 220 and 230), and incorporating provisions of 31 U.S.C. 6301-6308 (formerly the Federal Grant and Cooperative Agreement Act of 1977, Pub. L. No. 95-224), as well as general policy requirements applicable to recipients of Departmental financial assistance.

7 CFR Part 3017—USDA implementation of Governmentwide Debarment and Suspension (Nonprocurement) and 7 CFR Part 3021—Governmentwide Requirements for Drug Free Workplace (Grants).

7 CFR Part 3018—USDA implementation of Restrictions on Lobbying. Imposes prohibitions and requirements for disclosure and certification related to lobbying on recipients of Federal contracts, grants, cooperative agreements, and loans.

7 CFR Part 3019—USDA implementation of OMB Circular A-110, Uniform Administrative Requirements for Grants and Other Agreements With Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations (2 CFR Part 215).

7 CFR Part 3052—USDA implementation of OMB Circular No. A-133, Audits of States, Local Governments, and Non profit Organizations.

7 CFR Part 3407—CSREES procedures to implement the National Environmental Policy Act of 1969, as amended.

7 CFR 3430—Competitive and Noncompetitive Non-formula Grant Programs--General Grant Administrative Provisions.

29 U.S.C. 794 (section 504, Rehabilitation Act of 1973) and 7 CFR Part 15b (USDA implementation of statute) —prohibiting discrimination based upon physical or mental handicap in Federally assisted programs.

35 U.S.C. 200 et seq. —Bayh Dole Act, controlling allocation of rights to inventions made by employees of small business firms and domestic nonprofit organizations, including universities, in Federally assisted programs (implementing regulations are contained in 37 CFR Part 401).

D. Expected Program Outputs and Reporting Requirements

Grantees also are required to submit initial project information, annual summary reports, and a final report on completion of the project to CSREES' Current Research Information System (CRIS). The CRIS database contains narrative project information, progress/impact statements, and final technical reports that are made available to the public. For applications recommended for funding, instructions on preparation and submission of project documentation will be provided to the applicant by the agency contact. Documentation must be submitted to CRIS before CSREES funds will be released. Project reports will be requested by the CRIS office when required. For more information about CRIS, visit <http://cris.csrees.usda.gov>.

PART VII—AGENCY CONTACTS

Applicants and other interested parties are encouraged to contact the individual indicated for more information about each program area listed below.

CAR: Rick Meyer; National Program Leader, Plant and Animal Systems Unit; Cooperative State Research, Education, and Extension Service; USDA; STOP 2220; 1400 Independence Ave., SW; Washington, DC 20250-2220; telephone: (202) 401-4891; fax: (202) 401-4888; e-mail: hmeyer@csrees.usda.gov.

RAMP: Robert Nowierski; National Program Leader; Plant and Animal Systems Unit; Cooperative State Research, Education, and Extension Service; USDA; STOP 2220; 1400 Independence Ave., SW; Washington, DC 20250-2220; telephone: (202) 401-4900; fax: (202) 401-4888; e-mail: rnowierski@csrees.usda.gov.

MBT: William Hoffman; National Program Leader, Plant and Animal Systems Unit; Cooperative State Research, Education, and Extension Service; USDA; STOP 2220; 1400 Independence Ave., SW; Washington, DC 20250-2220; telephone: (202) 401-1112; fax: (202) 401-4888; e-mail: whoffman@csrees.usda.gov.

PART VIII—OTHER INFORMATION

A. Access to Review Information

Copies of reviews, not including the identity of reviewers, and a summary of the panel comments will be sent to the applicant PD after the review process has been completed.

B. Use of Funds; Changes

1. Delegation of Fiscal Responsibility

Unless the terms and conditions of the award state otherwise, the awardee may not in whole or in part delegate or transfer to another person, institution, or organization the responsibility for use or expenditure of award funds.

2. Changes in Project Plans

a. The permissible changes by the awardee, PD(s), or other key project personnel in the approved project shall be limited to changes in methodology, techniques, or other similar aspects of the project to expedite achievement of the project's approved goals. If the awardee or the PD(s) is uncertain as to whether a change complies with this provision, the question must be referred to the Authorized Departmental Officer (ADO) for a final determination. The ADO is the signatory of the award document, not the program contact.

b. Changes in approved goals or objectives shall be requested by the awardee and approved in writing by the ADO prior to effecting such changes. In no event shall requests for such changes be approved which are outside the scope of the original approved project.

c. Changes in approved project leadership or the replacement or reassignment of other key project personnel shall be requested by the awardee and approved in writing by the ADO prior to effecting such changes.

d. Transfers of actual performance of the substantive programmatic work in whole or in part and provisions for payment of funds, whether or not Federal funds are involved, shall be requested by the awardee and approved in writing by the ADO prior to effecting such transfers, unless prescribed otherwise in the terms and conditions of the award.

e. The project period may be extended by CSREES without additional financial support, for such additional period(s) as the ADO determines may be necessary to complete or fulfill the purposes of an approved project, but in no case shall the total project period exceed five years. Any extension of time shall be conditioned upon prior request by the awardee and approval in writing by the ADO, unless prescribed otherwise in the terms and conditions of award.

f. Changes in Approved Budget: Unless stated otherwise in the terms and conditions of award, changes in an approved budget must be requested by the awardee and approved in writing by the ADO prior to instituting such changes if the revision will involve transfers or expenditures of

amounts requiring prior approval as set forth in the applicable Federal cost principles, Departmental regulations, or award.

C. Confidential Aspects of Applications and Awards

When an application results in an award, it becomes a part of the record of CSREES transactions, available to the public upon specific request. Information that the Secretary determines to be of a confidential, privileged, or proprietary nature will be held in confidence to the extent permitted by law. Therefore, any information that the applicant wishes to have considered as confidential, privileged, or proprietary should be clearly marked within the application. The original copy of an application that does not result in an award will be retained by the Agency for a period of three years. Other copies will be destroyed. Such an application will be released only with the consent of the applicant or to the extent required by law. An application may be withdrawn at any time prior to the final action thereon.

D. Regulatory Information

For the reasons set forth in the final Rule related Notice to 7 CFR part 3015, subpart V (48 FR 29114, June 24, 1983), this program is excluded from the scope of the Executive Order 12372 which requires intergovernmental consultation with State and local officials. Under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 35), the collection of information requirements contained in this Notice have been approved under OMB Document No. 0524-0039.

E. Definitions

Please refer to 7 CFR 3430, Competitive and Noncompetitive Non-formula Grant Programs--General Grant Administrative Provisions, for the applicable definitions for this CSREES grant program.

In addition, the following definitions apply to this RFA:

Research activity means a scientific investigation or inquiry that results in the generation of knowledge.

Total integrated, multifunctional research, education, and extension approach means that the combination of grants (although the individual grants may involve only research, education, or extension activities or a combination thereof) awarded under the fiscal years program components will work together to address the priorities in United States agriculture as determined by the Secretary of Agriculture in consultation with the Advisory Board, that involve integrated research, extension, and education activities.

F. Electronic Application Checklist

Only electronic applications may be submitted to CSREES via Grants.gov unless indicated otherwise in the specific program Request for Applications (RFA). All applications submitted to CSREES must contain the applicable elements outlined in these guidelines. The following checklist has been prepared to assist in ensuring that the application is complete prior to submission:

◆ **Are you eligible to apply for the funding offered in the RFA?** Eligibility information for each funding opportunity is stated in Part III, Eligibility Information, of each RFA.

◆ **Are you applying to the correct funding opportunity associated with the RFA?**

When the application package is downloaded, Field 1 of the CSREES Supplemental Information Form will pre-populate with the Funding Opportunity Name. Please verify that the correct funding opportunity to which you are applying is listed.

◆ **Have you followed the guidelines for filling out your electronic application provided in the CSREES Grants.gov Application Guide, which is posted along with the electronic SF 424 R&R application package on Grants.gov?** Electronic applications should be prepared according to this guide and the specific program RFA. This guide is part of the corresponding electronic application package for the specific program to which you are applying.

◆ **Has your institution properly registered with Grants.gov to enable you to submit an application?** Those who wish to submit an application to CSREES should first contact their Authorized Representative (AR) to determine if the organization is prepared to submit applications through Grants.gov. See <http://www.grants.gov/GetStarted> for steps for preparing to submit applications through Grants.gov.

◆ **Have all attachments been submitted in the portable document format (PDF)?** CSREES will only accept PDF attachments. See Part III of the CSREES Grants.gov Application Guide.

◆ **Do all submitted PDF documents have one-inch margins and are typed or word processed using no type smaller than 12 point? Are all PDF documents numbered sequentially on each page of the attachment? Are all page limitations for a given attachment followed?**

◆ **Did you use the “Check Package for Errors” feature (see Part IV section 1.8 of the CSREES Grants.gov Application Guide)?**

◆ **Have all required components of the SF 424 Research and Related (R&R) Application Package posted under the funding opportunity on Grants.gov been completed?**

◆ **SF 424 R&R Cover Sheet**

☐ Have all required fields (highlighted in yellow and outlined in red) been completed?

◆ **SF 424 R&R Project/Performance Site Location(s)**

☐ Have all required fields been completed?

◆ **R&R Other Project Information**

☐ Have the fields describing project potential or actual environmental impact been properly completed?

Project Summary/Abstract

☐ Has the Project Summary PDF been attached to this form in Field 6?

☐ Are the names and affiliated organizations of all Project Directors listed at the top of the page in addition to the title of the project?

☐ Does this section adhere to the format and page limitations?

☐ Did you use the suggested Project Summary/Abstract Template found at:
www.csrees.usda.gov/home/faq_apply.html#abstract?

Project Narrative

☐ Has the Project Narrative PDF been attached to this form in Field 7?

☐ Is the project fully described?

☐ Does this section adhere to the format and page limitations?

☐ Response to Previous Review (for resubmitted applications only): Has the PDF been included as indicated in the RFA?

☐ Has the application been clearly and meaningfully revised and are the revisions briefly described?

☐ Have comments from the previous review been addressed?

Bibliography & References Cited

☐ Has the Bibliography & References Cited PDF been attached to this form in Field 8?

☐ Are all references cited and are all citations referenced?

☐ Do all citations contain the names of all authors, the year, title, and publication reference in accepted journal format?

Facilities & Other Resources

☐ Has the Facilities & Other Resources PDF been attached to this form in Field 9?

☐ Has a description of your facilities, sufficient to indicate that you will be able to carry out this project, been given?

Equipment

☐ Has the Equipment PDF been attached to this form in Field 10?

- ☐ Is the description of your equipment sufficient to indicate that you will be able to carry out this project?

◆ **R&R Senior/Key Person Profile**

Biographical Sketch

- ☐ Has the biographical sketch (vitae) PDF for the PD and each co-PD, senior associate, and other professional personnel been attached?

Current and Pending Support

- ☐ Has the current and pending support PDF for key personnel been attached?
- ☐ Have all current and pending projects been listed and summarized, **including this proposal**?
- ☐ Did you use the suggested Current and Pending Support Template found at: www.csrees.usda.gov/home/faq_apply.html#current?

◆ **R&R Personal Data**

- ☐ As noted in Part V, 5., the submission of this information is voluntary and is not a precondition of award. If completing the information, do not enter any data in the field requesting the social security number.

◆ **R&R Budget**

- ☐ Have all fields been completed for each PD and co-PD(s)?
- ☐ Are annual and summary budgets included? For multi-institution applications, have subaward budgets been included for each institution involved?

Budget Justification

- ☐ Has the Budget Justification PDF been attached to this form in Field K?
- ☐ Are budget items individually justified?
- ☐ For multi-institution applications, have subaward budget justifications been included for each institution involved?
- ☐ Have any matching requirements been addressed, if applicable?

◆ **CSREES Supplemental Information Form**

- ☐ Has Field 1 been pre-populated?
- ☐ Does Field 2 indicate the Program Code Name and Program Code to which you are applying?

Conflict of Interest List

- ☐ Has the Conflict of Interest List PDF been attached to this form in Field 8?

- ☐ Has a Conflict of Interest List been provided for all individuals who have submitted a Biographical Sketch?
- ☐ Does the Conflict of Interest list include the four categories as appropriate?
- ☐ Did you use the suggested Conflict of Interest Template found at:
www.csrees.usda.gov/home/faq_apply.html#coi?